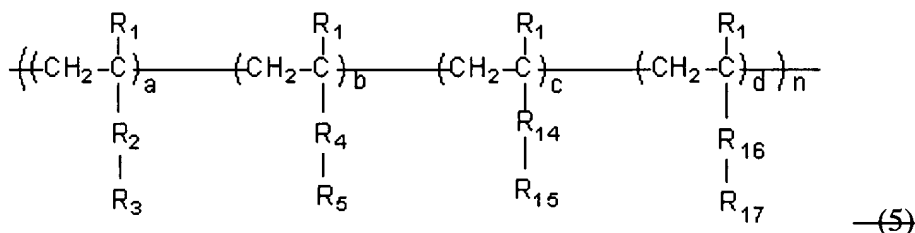


Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

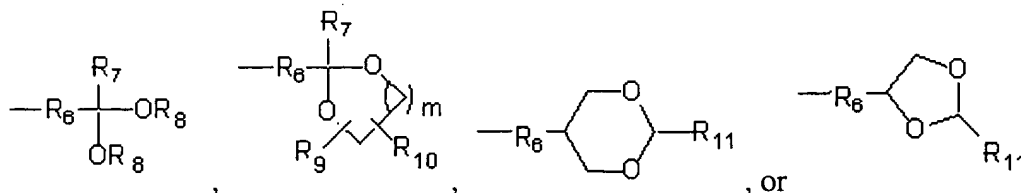
3. (currently amended) A polymer for a chemically amplified negative photoresist, which is represented by formula 5 the formula:



wherein R₁ is H or CH₃;

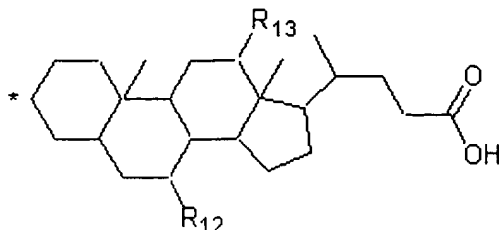
R_2 and R_4 are each independently selected from $(R)_\alpha(CH_2)_\beta R'$ and $(R)_\alpha[(CH_2)_\gamma O]_\delta R'$, wherein (wherein, R is CO , CO_2 , O , OCO , or OCO_2 , R' is O , CO_2 , or OCO_2 , α is 0 or 1, β is 0 to 5, γ is 1 or 2, and δ is 1 to 5), but if R and R' are both O , then β is not 0;

R₃ is represented by one of the formula:



wherein R₆, which combines an acetal compound and a vinyl compound, is a C₁-C₅ saturated alkyl, a C₁-C₅ ether, or a C₁-C₅ carbonyl; R₇ to R₁₁ are each independently selected from H, C₁-C₅ saturated alkyls, C₁-C₅ ethers, C₁-C₅ carbonyl groups, C₁-C₅ alcohol groups; and m is a number ranging from 1-5; and

R₅ is represented by formula:



wherein R₁₂ and R₁₃ are each independently selected from H and OH, and

_____ * represents the bonding site at which the R₄ group is bonded;

R₁₄ and R₁₆ are each independently selected from a single bond, (R)_α(CH₂)_βR' and (R)_α[(CH₂)_γO]_δR', wherein (wherein R is CO, CO₂, O, OCO, or OCO₂, R' is O, CO₂, or OCO₂, α is 0 or 1, β is 0 to 5, γ is 1 or 2, and δ is 1 to 5), but if R and R' are both O, then β is not 0;

_____ R₁₅ is a hydroxyl group;

_____ R₁₇ is a carboxyl group;

a, b, c, and d represent mole ratios of each monomer, a has a value of 0-0.5, b has a value of 0-0.9, c has a value of 0-0.3, and d has a value of 0-0.3, provided that a+b+c+d = 1; and

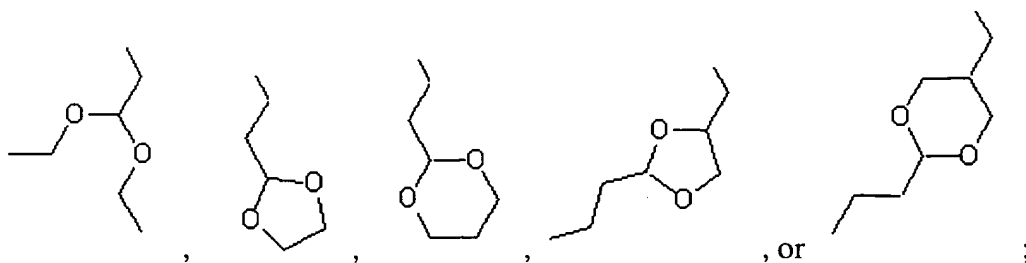
n represents the degree of polymerization of each polymer, and has a value of at least 2.

4. (original) The polymer for a chemically amplified negative photoresist according to claim 3 wherein:

R₁ is H;

R₂ is CO₂;

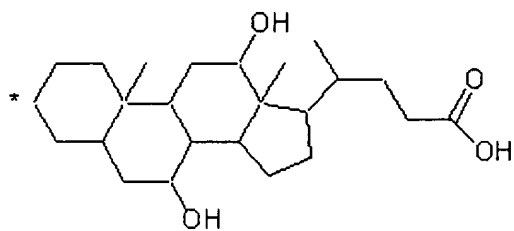
R₃ is



R₄ is CO₂;

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R₅ is



R₁₄ is CO₂CH₂CH₂,

R₁₅ is OH,

R₁₆ is a single bond, and

R₁₇ is COOH.

5. (canceled)

6. (canceled)

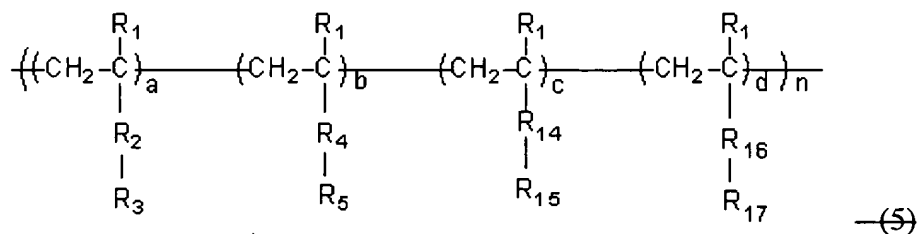
7. (canceled)

8. (canceled)

9. (currently amended) A chemically amplified negative photoresist composition comprising;

a photoacid generator; and

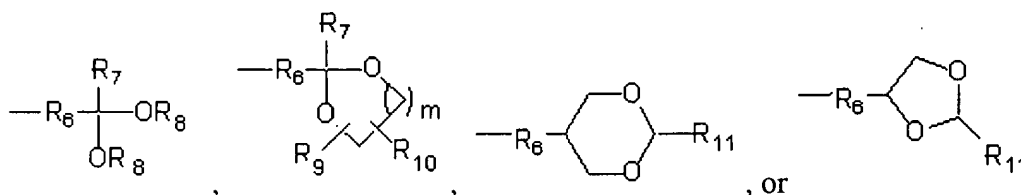
a polymer of ~~formula 5~~ of the formula:



wherein R₁ is H or CH₃;

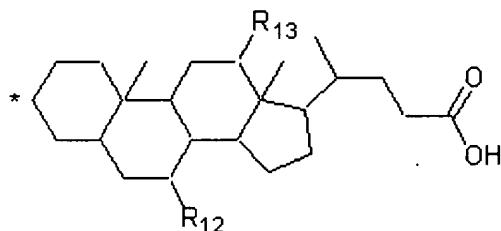
R_2 and R_4 are each independently selected from $(R)_\alpha(CH_2)_\beta R'$ and $(R)_\alpha[(CH_2)_\gamma O]_\delta R'$, wherein ~~wherein~~, R is CO, CO₂, O, OCO, or OCO₂, R' is O, CO₂, or OCO₂, α is 0 or 1, β is 0 to 5, γ is 1 or 2, and δ is 1 to 5, but if R and R' are both O, then β is not 0;

R_3 is represented by one of the formula:



wherein R_6 , which combines an acetal compound and a vinyl compound, is a C₁-C₅ saturated alkyl, a C₁-C₅ ether, or a C₁-C₅ carbonyl; R_7 to R_{11} are each independently selected from H, C₁-C₅ saturated alkyls, C₁-C₅ ethers, C₁-C₅ carbonyl groups, and C₁-C₅ alcohol groups; and m is a number ranging from 1-5; and

R_5 is represented by the formula:



wherein R_{12} and R_{13} are each independently H or OH; and

* represents the bonding site at which the R_4 group is bonded;

R_{14} and R_{16} are each independently selected from a single bond, $(R)_\alpha(CH_2)_\beta R'$ and $(R)_\alpha[(CH_2)_\gamma O]_\delta R'$, wherein ~~wherein~~, R is CO, CO₂, O, OCO, or OCO₂, R' is O, CO₂, or OCO₂, α is 0 or 1, β is 0 to 5, γ is 1 or 2, and δ is 1 to 5, but if R and R' are both O, then β is not 0;

_____ R_{15} is a hydroxyl group;

_____ R_{17} is a carboxyl group;

a , b , c , and d represent the mole ratios of each monomer, wherein a has a value of 0-0.5, b has a value of 0-0.9, c has a value of 0-0.3, and d has a value of 0-0.3, provided that $a+b+c+d = 1$; and

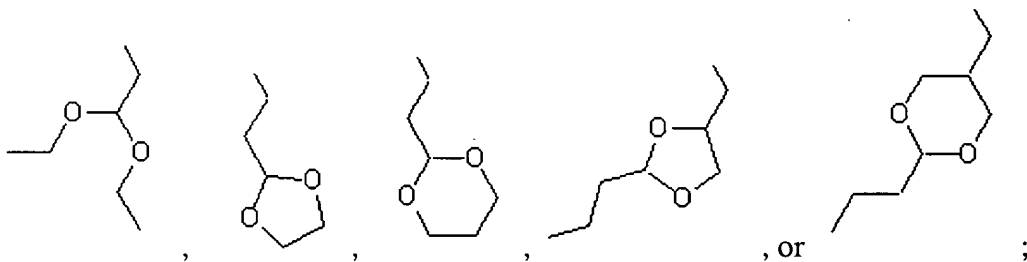
n represents the degree of polymerization of each polymer, and has a value of at least 2.

10. (original) The chemically amplified negative photoresist composition according to claim 9 wherein

R₁ is H;

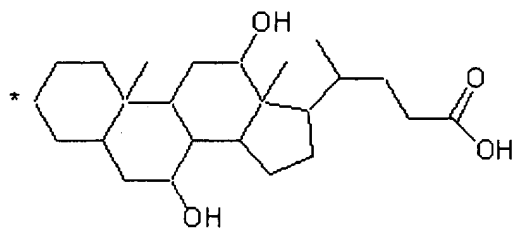
R₂ is CO₂;

R₃ is



R₄ is CO₂;

R₅ is



R₁₄ is CO₂CH₂CH₂,

R₁₅ is OH,

R₁₆ is a single bond, and

R₁₇ is COOH.

11. (original) The chemically amplified negative photoresist composition according to claim 9 wherein the photoresist composition comprises 10 to 20 wt.% of said polymer and 0.1 to 1.0 wt.% of said photoacid generator.